OIPE JC184 MAR 2 5 2005 PATENT & TRADEMARK OFFICE

APPENDIX I:

CLAIM AMENDMENTS:

Cancel Claims ..., amend Claims ..., and enter new Claims ... as indicated in the following listing of the claims:

1. (*currently amended*) A methanol reforming catalyst containing passivated copper and zinc oxide and/or alumina, which can be prepared by

 (1) precipitating or spray-drying a mixture of catalyst precursor components dissolved or suspended in a diluent in order to form a solid catalyst precursor in the form of powder or granules,

 (2) calcining and reducing the solid catalyst precursor obtained in stage (1),

 (3) passivating the reduced catalyst precursor obtained in stage (2) and

 (4) shaping the passivated catalyst precursor obtained in stage (3) to form the catalyst,

 and wherein stage (3) comprises passivating the reduced catalyst precursor obtained in stage (2) exclusively with dilute air at room temperature to obtain copper clusters which are only externally passivated.

2. (*original*) A catalyst as claimed in claim 1, wherein the shaping in stage (4) leads to layers, extrudates, monoliths, strands, pellets, tablets or chips.

3. (*original*) A catalyst as claimed in claim 1, wherein the calcination and reduction are carried out in succession in stage (2), it being possible for the calcined catalyst precursor to be comminuted in between.

4. (*original*) A catalyst as claimed in claim 1, wherein the catalyst contains alumina in addition to passivated copper and zinc oxide, and solutions of zinc, aluminum and copper salts are precipitated simultaneously or in any desired sequence in stage (1).

5. (*original*) A catalyst as claimed in claim 4, wherein stages (1) and (2) are carried out as follows:

 (a) precipitation of a solution of zinc and aluminum salts, the Zn:Al atomic ratio being from 3:1 to 1:3, with an alkali

metal carbonate or hydroxide solution at a pH of from 5 to 12 and a temperature of from 20 to 100°C,

(b) isolation and washing of the precipitate to remove alkali metal ions,

(c) drying of the precipitate,

(d) calcination of the precipitate at from 250 to 800°C to give a mixed oxide,

(e) dispersing of the mixed oxide in an acidic solution of copper and zinc salts, the Cu:Zn atomic ratio in the solution being from 1:5 to 20:1,

(f) precipitation of the dispersion with an alkali metal carbonate or hydroxide solution at a pH of from 6 to 9 and a temperature of from 20 to 100°C,

(g) performance of steps (b) to (d),

(h) reduction of the catalyst precursor obtained in stage (g) with a gas containing free hydrogen,

it being possible for the solutions in steps (a) and/or (e) additionally to contain salts or oxides of one or more elements of the platinum metals, of groups 4, 5 and 11 and of the lanthanides of the Periodic Table of the Elements or for the salts or oxides to be applies to the mixed oxides.

6. (*previously presented*) A process for the preparation of the catalyst defined in claim 1, which comprises

(1) precipitating or spray-drying a mixture of catalyst precursor components dissolved or suspended in a diluent in order to form a solid catalyst precursor in the form of powder or granules,

(2) calcining and reducing the solid catalyst precursor obtained in stage (1),

(3) passivating the reduced catalyst precursor obtained in stage (2) and

(4) shaping the passivated catalyst precursor obtained in stage (3) to form the catalyst.

7. (*original*) A process for steam-reforming methanol by reacting methanol and water over a catalyst, as defined in claim 1, at from 0.5 to 10 bar and from 150 to 450°C.

8. (*original*) A process for reducing the volume shrinkage and for increasing the mechanical hardness during operation of methanol reforming catalysts, wherein the methanol reforming catalyst is prepared by a process as claimed in claim 6.

9. (*previously presented*) A catalyst as claimed in claim 1, wherein stage (2) comprises first calcining the solid catalyst precursor at a temperature of more than 300°C, and then subjecting the calcined solid catalyst precursor to a reduction or a calcination under reducing conditions at a temperature of less than 300°C.

10. (*previously presented*) A catalyst as claimed in claim 1, wherein stage (2) comprises reducing the solid catalyst precursor with hydrogen by means of
 - an isothermal procedure at a constant hydrogen concentration;
 - an isothermal procedure with continuously increasing hydrogen concentrations;
 - a procedure employing a constant hydrogen concentration and a continuous increase in temperature from room temperature to 500°C; or
 - a procedure employing continuously increasing hydrogen concentrations and a continuous increase in temperature from room temperature to 500°C.

11. (*canceled*)

12. (*currently amended*) A catalyst as claimed in claim ~~11~~ 1, wherein the reduced catalyst precursor is passivated in an assembly comprising two coupled rotating tubes and an inert lock ensuring a separation of atmospheres, and air is passed countercurrently to the reduced catalyst precursor into the rotating tube.

13. (*previously presented*) A catalyst as claimed in claim 1, wherein stage (2) comprises calcining and reducing the solid catalyst precursor simultaneously.

14. (*previously presented*) A catalyst as claimed in claim 1, wherein stage (2) comprises calcining and reducing the solid catalyst precursor in succession.